

Data Restoration and Recovery (DRR)

Transportation Specifications

DRR Vehicle

A 2009 International 7400 SBA 4x2 or equivalent equipped with the following features:

Weight Capacities:

- Gross Vehicle Weight Rating (GVWR); ~37,000 lbs or less
- Front Gross Axle Weight Rating (GAWR); ~14,000 lbs
- Rear Gross Axle Weight Rating (GAWR); ~23,000lbs

Engine/Chassis: (or equivalent)

- Alternator; Leece-Neville A0014951PA Brush Type, 12 Volt, 200Amp Capacity
- Battery; International Maintenance-Free, (3) 12 Volt 1950CCA Total
- Brakes; ABS, Air Dual System for Straight Truck Applications
- Engine; International DT466 High Torque 50 State, 285 HP, 800 lb-ft Torque@ 1400 RPM
- Engine Block Heater; Phillips 120 Volt/1250 Watt Heater
- Fuel tank capacity; (2) Top Draw, D Style, Non Polished Aluminum, 50 U.S. gal, Total Capacity 100 gal (approximate)
- Suspension, Front; Parabolic, Taper Leaf; 14,000-lb Capacity; With Shock Absorbers
- Suspension, Rear; Air, Single 23,000-lb Capacity, 9.5" Ride Height, With Shock Absorbers
- Transmission; Allison 3000 RDS Automatic Transmission With PTO Provision
- Wheels; 22.5" Polished Aluminum, 10-Stud Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims. With Steel Hubs
- Exhaust Diverter, Minimum 20'

Interior:

- Climate (temperature) controls; Air Conditioner, with Integral Heater & Defroster
- Door locks; power left & right doors
- Lighting; Dome Light, Cab, Rectangular, Door Activated, Timed Theater Dimming
- Integral to Console, Courtesy Light (2) Mounted Under Instrument Panel
- Windows; power left & right doors
- Cab to Body access opening

Audio System: (or equivalent)

- AM/FM Premium Stereo, With CD Player, Weatherband, Clock With Alarm, Satellite Radio Compatible, With Multiple Coaxial Speakers
- Four-speaker system

Seating: (or equivalent)

- Driver Seat; National 2000 Air Suspension, High Back With Integral Headrest, Vinyl, Isolated, With 2 Position Front Cushion Adjustment, -3 to +14 Degree Seat Back Adjustment, Single Chamber Air Lumbar Support
- Passenger Seat: National 2000 Air Suspension, High Back With Integral Headrest, Vinyl, Isolated, With 2 Position Front Cushion Adjustment, -3 to +14 Degree Seat Back Adjustment, Single Chamber Air Lumbar Support Exterior

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- Mirrors; Rectangular, 7.09" x 15.75", Brackets Breakaway Type, With 102" Wide Spacing, With Integral Convex Both Sides, With All Heated Heads, Thermostatically Controlled, With Clearance Lights LED, Powered Both Sides, With Bright Heads & Brackets Headlamps; Daytime Running Lamps with Automatic Exterior Lamp Control
- Tow Hooks; Front (2) Inside Rail, Frame Mounted.
- Windshield Wipers; Single Motor, Electric, Cowl Mounted
- Windshield Wipers Switch; 2-Speed with Wash and Intermittent Feature, Integral with Turn Signal Switch

Colors:

- Paint; Ford's Dark Shadow Grey Metallic
- Interior; Gray
- NASA Logo's / Graphics

Chassis Preparation

- The chassis must be prepared for the installation of the body.
 - The preparation includes running electrical and fuel lines for the generator installation and body electrical.
 - All lines must be protected by sheathing where they pass through chassis rail components to prevent wear.

Body – Up to 28' ft with Ducted Air Conditioning

- The body should be constructed with a smooth exterior aluminum surface with no external fasteners.
- The all-aluminum body dimensions should be no less than 101" in width, and up to 28' in depth.
- The engineering of the body should incorporate fully welded 2x2, 2x4 and 2x6 aluminum tubes to provide maximum structural rigidity while maintaining proper weight ratios.
- Stud spacing should be 16" (dependant on structural load and location of tubes).
- The interior walls should be lined with a minimum of .063" aluminum. No plywood can be used in any part of the wall construction.
- The floor, walls, and roof must be insulated to the maximum amount possible within the wall thickness to provide a minimum insulating value of R9.
- The exterior of the body must be painted to match the chassis using a high quality paint process for maximum gloss and hardness.
- The interior of the body should be covered with anti-static, commercial grade carpet.
- The floor covering should be hard flooring suitable for commercial use, black in color.

Burglar Alarm (Remote Activated)

- A remote activated burglar alarm system must be provided with switches on all doors.
- An alarm siren should be installed under the vehicle hood.

Shelter/Body Windows

- Body should not include any windows.

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Under-floor Storage Compartment

- A minimum of four (4) Under-floor Storage Compartments should be located in the skirt of the body (2 on each side of the body).
- The capacity of the storage compartments should be no less than 14 cu-ft.
- Each storage compartment must be lighted and alarmed.

Power Entry Compartment

- A Power Entry Compartment must be located in the skirt of the body.
- The compartment must be lighted and alarmed.
- The compartment should house a transformer, charger, and provide shore cord input for the power system.
- The compartment should also contain a mast compressor, with mast control, and vehicle jack controls.
- The compartment should provide a single 90 Amp 220V, 25 ft shore cord and inlet.
 - The inlet must contain a weather tight pass through to allow the shore power to be plugged in and supplying power to the vehicle with the door closed and locked.
 - The shore end of the cord should have bare ends for installation of a connector of the customer's choice.

Generator Compartment (Below Floor)

- An all-aluminum, exterior-accessed generator compartment must be provided below the body floor.
- The compartment must be lighted and alarmed.
- The compartment should be lined with sound suppression material.
- The door of the compartment must allow closed-door operation of the generator.
- The door should be constructed of formed aluminum panels of no less than .090" aluminum sheet stock.
- The door should be structurally fortified with internal strengthening ribs of 2x2 Aluminum tubing.
- The door must provide lock mechanisms of extremely high quality that are flush mounted with no external fasteners.
- The door should be horizontally hinged using a gear-type waterproof hinge assembly and should include a pneumatic hold-open, and provide a continuous rubber seal.
 - Additionally, a stainless steel sill plate should be located under the door to prevent paint chips at the lower edge of the doorframe.

Shelter/Body Access Doors

- The body should provide two (2) personnel access doors without windows, both on the curb side of the vehicle.
- The doors should be constructed of formed aluminum panels of no less than .090" aluminum sheet stock.
- The doors should be structurally fortified with internal strengthening ribs of 2x2 Aluminum tubing.
- The doors must provide lock mechanisms of extremely high quality that are flush mounted with no external fasteners.
- The doors should be vertically hinged using a gear-type waterproof hinge assembly.
- The doors should be equipped with a limit strap.

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- The door latch mechanisms should connect at two points (at the top edge and bottom edge) of the door to provide a secure weather-tight seal.
 - Additionally, a stainless steel sill plate should be located under the door to prevent paint chips at the lower edge of the doorframe.
- The doors should provide a grab handle to assist personnel during entry and egress from the vehicle.
- Folding steps must be provided to assist personnel with initial entry into the shelter.
- Stairs for shelter access doors should be all aluminum with no slip stair treads and should hook into place below the doors.
- The stairs should permit pivoting to accommodate different terrain.
- A rubber mat should be provided inside each access door.
- A cipher lock with a key pad with a no key bypass deadbolt must be installed on both personnel access doors.
- The doors must be alarmed.

Battery Access Door

- The body should provide a Battery Access Door for maintenance access to vehicle batteries.
- The compartment must be lighted and alarmed.
- The Battery Access Door should be constructed of formed aluminum panels of no less than .090" aluminum sheet stock.
- The door should be structurally fortified with internal strengthening ribs of 2x2 Aluminum tubing.
- The door must provide lock mechanisms of extremely high quality that are flush mounted with no external fasteners.
- The door should be horizontally hinged using a gear-type waterproof hinge assembly and should include a pneumatic hold-open, and provide a continuous rubber seal.
 - Additionally, a stainless steel sill plate should be located under the door to prevent paint chips at the lower edge of the doorframe.

Remote Connector Panel

- A remote connector panel must be provided in an under-floor storage compartment.
- The panel face must provide the required I/O connections required to support the installed systems.

Cable Pass-Through Port

- A 2" nominal diameter cable "pass-through" port must be provided on the vehicle body.
- "pass-through" must be sealed in a manner to prevent water access

Antenna Mounts

- Twenty (20) NMO bases should be provided for communication antenna mounts with coax runs to the rack area.

Ladder (Removable)

- A ladder constructed of 1" x 2" aluminum tube must be provided for access to the roof. The ladder should be powder-coated for extreme durability and have integral diamond plate treads.

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- The ladder should be designed to extend beyond the roof to assist in backing down the ladder.
 - Additionally, a grab handle must be added to the roof for safety.
 - The ladder must be pinned and capable of full removal.

Signal Cable Troughs

- A Cable trough should be provided on the roof to distribute both signal and power as required to equipment mounted on the roof.

Tap Transformer (90 Amp Input)

- A multi-tap transformer containing a rotary power select switch with selections for correcting input voltage of 190 - 200 - 215 - 230 - 240 volts of input power and a volt meter for measuring input voltage must be provided.

Converter-Charger (120V to 12V 80 Amp)

- An 80 amp charger must be provided to charge the 12 volt batteries and to supply DC power whenever 120 volt power is available.
- The charger must be controllable by a circuit breaker at a power distribution panel.

20 kW or greater on-board Diesel Generator

- A minimum 20 kW 120/240 volt, single phase, 60 Hz vehicle mounted generator must be provided.
- The generator should be water cooled, diesel driven with low oil pressure shut down.
- A remote start/stop switch for the generator must be located at the interior power panel.

Exterior Lighting (12V Courtesy)

- A 12 Volt courtesy light must be located under the personnel door to illuminate the stairs.

Exterior Lighting (Scene Lights)

- 12 Volt Whelen (PN: 810CAOZR) "Scene Lights" should be provided to illuminate the perimeter of the truck.
- The switches for the lights must be located at the power distribution panel

Back-up Alarm (Tail Gator)

- A "Tail Gator" back up warning alarm must be provided and installed as part of the vehicle 12 Volt electrical system.
- The back up alarm must be tied to the "backup" lights circuit and must sound when the vehicle is put into reverse gear.

Back-up Camera

- A backup camera system must be provided on the rear exterior wall of the vehicle, and an LCD monitor must be mounted in the cab area.
- The backup camera should be a high resolution low light color 1/3" CCD Waterproof Camera such as the VCCS130XP Ultra model.
- The cab mounted monitor should be a minimum 6.8" LCD Monitor with Sun Shield.

Air Conditioner (15,000 BTU Roof Mounted Ducted)

- Heat and air conditioning should be provided to the shelter by four (4) 15,000 BTU roof mounted units.

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- Controls for the a/c unit(s) should be located, for convenience, at the power panel.
- Air should be delivered to the work space and the racks through a full width and length ceiling plenum. This system should provide for very quiet operation and allow the air to be controlled and directed to where it is needed most.
- The air conditioners should each have an integral 3,600 BTU heat strip installed.

Power Distribution 20 kW (Single Shore & Single Gen)

- A 120 / 240 volt power distribution panel must be provided with magnetic/hydraulic circuit breakers.
- 120 / 240 volt power selection rotary switch(s) and circuit breakers must be provided at the panel to select either the external power input(s) and/or on board diesel powered generator input.
- Surface mounted 120 Volt distribution throughout the vehicle must be provided by stranded copper wire in wire mold raceways and outlets as required.
- The panel must be manufactured to conform to current commercial codes and should be made entirely of aluminum.
- No plywood can be used at any point in the electrical system.
- All input external power cable connectors must be placarded as to appropriate function.
- Analog Volt, amp and frequency meters must be located in the distribution panel to permit the monitoring of shore power and generator outputs.
- A total of six (6) GFI protected exterior duplex outlets must be provided, two street-side, two curbside and two rear.

Body Interior: (maximum of 6 workstations)

Conference Table (Removable)

- A 30" x 60" conference table should be provided to permit room for up to four personnel to gather around.
- The Conference Table must be capable of breaking down and stowing against a wall to permit operational flexibility.
- The Conference Table top should be constructed of a solid surface material, such as "Trespa" that will provide maximum stability and durability.

Console Counter (3-Bay)

- A solid surface console counter, minimum 12" deep, must be provided and mounted in front a 3-bay equipment rack.
- The console counter top should be constructed of a solid surface material, such as "Trespa" that will provide maximum stability and durability.
- The console counter must be equipped with a light under the work surface to illuminate the space below the console counter.
- A service light circuit to control this light should also be provided.

Fold Down Workstation Counters in Rear Operations Area

- Solid surface fold-down console counters, minimum 20" deep, must be provided and mounted in the rear workstation/operations area
- The console counters should be constructed of a solid surface material, such as "Trespa" that will provide maximum stability and durability.
- The counters must be hinged allowing them to fold down and stow against the side walls when not in use.

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Fold-Down Workstation Counters in Front Operations Area

- Solid surface fold-down console counters, minimum 20" deep, must be provided and mounted in the rear workstation/operations area
- The console counters should be constructed of a solid surface material, such as "Trespa" that will provide maximum stability and durability.
- The counters must be hinged allowing them to fold down and stow against the side walls when not in use.

Operations Area Partition/Sliding Door w/Window

- A partition with a sliding door must be provided to separate front/rear operation areas from the center communications area.
- The sliding doors must latch open and closed and contain a window.
- The sliding doors must be lockable from the center communications area side.

Rack Set (2 Bay - Full Height)

- A two bay, all aluminum, electronic equipment rack must be provided with standard 19" rack frames.
 - Tapped equipment mounting angles should be installed front and rear at 24" - 30".
- The rack frames should be structurally fastened to the floor and ceiling with shock mounts.
- A Mid-Atlantic 32" depth racks are recommended.
- A powder-coated finish should be applied to the racks for durability and scratch resistance.
- The racks should be trimmed with matching powder-coated panels.
- Each rack should contain two (movable) plug strips.
- Access to front and rear of cabinets from the interior of the body. No exterior access panels.

Rack Set (3 Bay - Full Height)

- A three bay, all aluminum, electronic equipment rack must be provided with standard 19" rack frames.
 - Tapped equipment mounting angles should be installed front and rear at 24".
- The rack frames should be structurally fastened to the floor and ceiling with shock mounts.
- A powder-coated finish should be applied to the racks for durability and scratch resistance.
- The racks should be trimmed with matching powder-coated panels.
- Each rack should contain two (movable) plug strips.
- Access to front and rear of cabinets from the interior of the body. No exterior access panels.

NOTE: The 32" racks can be facing rear of vehicle and 24" racks can be facing front of vehicle, or in single line facing curb side and rear facing street side of the vehicle, and mounted in the rear of the vehicle. The conference table can then be stored on the curb side wall at the rear of the cabinets.

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Chair (Roll Around)

- The shelter should provide low backed secretarial type roll around chairs with no arms, 5 casters, and adjustable back and height features.
- Travel tie downs made from elastic cords with hooks and eye hooks attached to the underside of the counters should be provided.
- The chairs should be made of padded foam and covered with upholstery fabric.

Toilet & Toilet Enclosure

- The shelter should provide a toilet area, and enclosure with a locking door and "in use" sign.
- The toilet area should have a toilet paper dispenser, an overhead white light, and an air exhaust for the toilet.
- The shelter toilet should be an Incinolet Model RV toilet that uses electric heat to reduce human waste to a small amount of germ-free ash that has no restrictions on its disposal.

Roof Exhaust Fan (12V)

- 12 Volt roof air in/exhaust fans must be provided in each of the operations areas.

Galley Cabinetry

- The galley area should be provided with a counter, base storage cabinet, and overhead storage cabinets.
- A 120VAC power outlet must be provided in the area along with a light attached the underside of the overhead cabinet.
- The Galley must also include a stainless steel sink with chrome plated hardware, an electric water pump, and an in-line electric water heater, with one (1) 5 gallon fresh water tank, and one (1) 5 gallon gray water tank.

Refrigerator, Microwave, & Coffee Maker

- A Kenmore, 93361, 3.6 cu-ft refrigerator (or equivalent); GE SpacemakerII 0.8 cu-ft microwave (or equivalent); and a Black & Decker, ODC325N, Spacemaker 12-cup coffee maker (or equivalent) should be provided in the galley.

Miscellaneous Features

- The shelter should be provided with one (1), mounted, white board, and one (1) mounted, cork bulletin board.

Heater (Wall Mounted)

- A wall mounted 5,000 BTU 120 volt electric heater should be provided and installed in the front and rear shelter operations areas.

Heater (Rack Base)

- A 1kw, 3,333 BTU, 120 Volt electric heater should be mounted in the base of the 3-bay electronics rack assembly.

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Interior Lighting (12V Amiable Operational)

- 12 Volt adjustable ceiling lights with individual switches should be provided.
- The operational lighting should be controlled by a main breaker and a series of dimmers allowing each group of lights to be control independently.
- A power panel courtesy light should be installed at the power panel to illuminate the power breakers.

Interior Lighting (Fluorescent Utility)

- 12 Volt fluorescent lights must be provided in the shelter, with switches located at the power panel.

Safety Equipment

- A CO2 fire extinguisher must be mounted in the shelter operations area and an ABC extinguisher must be provided in the cab of the vehicle.
- A carbon monoxide (CO) detector/alarm device must be installed in the interior of the vehicle shelter.
- A Safety Kit Consisting of: DOT approved flares, two safety triangles and four orange safety cones should be provided.

This listing is DRR equipment that is to be procured and installed by the vendor during manufacturing and integrated into an operational state:

Interoperability Equipment

(Transportation)

Radio Cantilever Rack Mounts	Motorola	90421
ACU-2000 Card Cage	Raytheon	5061-300000
ACU-2000 Card Modules:		
4 wire Devices (radio)	Raytheon	DSP-2 IP
2 wire Devices (POTS)	Raytheon	PSTN-1 IP
SIP Channel	Raytheon	SCM-2
Control Processor	Raytheon	CPM-6
Keypad	Raytheon	HSP-2A IP
ACU-2000 Radio Cables	Raytheon	TBD
72 Amp RP-15 Power Supply	Duracomm	601289

UHF Radio Equipment

(Transportation)

Astro Digital CAI	Motorola	G806AT
Encryption UCM Hardware	Motorola	G159AC
AES Encryption	Motorola	G843AC
XTLI-5000 05 Control Head	Motorola	G442AB
Control Head Software	Motorola	G444
Smartnet Operation	Motorola	G50AL
KeyPad Microphone	Motorola	W20
Enhanced Digital ID Display	Motorola	G114AE
Remote Mount	Motorola	G67
5 Watt Speaker	Motorola	B18
Enhanced Digital ID Display	Motorola	G114
Remote Mount Cable	Motorola	G610

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UHF Mobile Antennas (Transportation)

Antenna Wideband 380-470 MHz	Motorola	G431
Repeater Antenna Helical	Motorola	H125

HF Radio Equipment (Transportation)

micom3T 125W HF-SSB Transceiver	Motorola	M91AMNOKV5-K
Control 7 Software	Motorola	G424
Interface Cable	Motorola	S809
Continuous Duty Data Package	Motorola	FLN2294
Antenna Tuner	SGC	SGC-230
HF Antenna and Mount	SGC	SGC-303

Amateur Band Radio Equipment (Transportation)

VHF Amateur Radio	ICOM	IC-2820H
Separation Cable	ICOM	OPC-1663
Digital/GPS Unit	ICOM	UT-123
Dual Band Antenna	Tessco	29706
Antenna Mount	Tessco	32656

Mobile Radio Scanner (Transportation)

Scanner	UNIDEN	BCD996T
Scanner Base Station Antenna	ProComm	SP800

Voice/Cellular Communication Equipment (Transportation)

2-line Speaker Phone	GE	2-9484GE2
SX5E Cellular Base Station	Tellular	SX5T5G89F/1A1X
Power AMP Antenna	Tellular	DA4KFME
DA-4000 Jumper Cable	Tellular	CBL-MUHF-TNC-18
High-gain antenna	Tellular	CA04M

Video Equipment (Transportation)

IP Conference Phone	LifeSize	1000-0000-0101
HD Video System	LifeSize	1000-0000-1108
46" 1080p Flat-Panel LCD	Sony	KDL-46XBR4
Rackmount Keyboard	ADEK	MK-KPT5-AB
15" LCD Rackmount Monitor	Marshall	V-R151P
Mini-State Directional Antenna	AntennaCraft	5MS9000
Camera Cable	Audiovox	CEC25
Camera Adaptor	Audiovox	3130006
Waterproof Camera w/Mic	Audiovox	AOC130XP
DPDT Selector Switch	C&K	7201P3YZQE
Mini DV, DVD, HDD Recorder	JVC	SR-DVM700US
4" Quad LCD Monitor	Marshall	V-R44P
Custom Rackmount	Mid-Atlantic	RSH-4A-C
Blank Panels	Mid-Atlantic	
4-Way Off Air Splitter	Monster	SS4RF
Stereo Audio/Video Distributor	RDL	FP-AVDA4

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Power Supply	RDL	PS-24A
RCA Audio Y-Adapter	Philips	RS 55020948
1x2 VDA Composite	VAC	11-911-102
Rack Mount Tray	Videotek	DAT-1
Audio/Video Routing Switcher	Videotek	PVS-6A
Blank Panel for DAT-1	Videotek	DAT-2
Confidence Monitor	Wohler	VMQ-4
Four-camera input video server	Axis	Model 241Q
RGBHV switcher	Extron	SW6 RGBHV
Video Switcher with audio	Optima	16x16
Touch-screen controller	AMX	NI-3100
PSN Power Supply	AMX	PSN 6.5
Rack Mount Touch Panel	AMX	NXD-CV10
Rack Mount Kit	AMX	NXA-RK10
Biamp CS DSP	BIAMP	Nexia CS
External Rack-mounted Camera	Pelco	ES31CBW18-5N
Pedestal Camera Mount	Pelco	PM2010
Camera Power Supply	Pelco	TBD
Joystick Controller	Video Analytics	KCT-100
Data Merger/Matrix	Pelco	CM9760
Internal camera	Canon	C50-i
DirecTV Receiver	Samsung	SIR S300W
DirecTV Antenna & Tripod	SatCom	MP2002PKG

Audio Equipment

(Transportation)

Internal rack-mounted Speaker	Anchor	AN 130BK
Audio Power Amp	QSC	CX302
External rack-mounted Speakers	JBL	Control 25AV-WH
Wireless headset microphone	Shure	SLX 14/30WH
Wireless handheld microphone	Shure	SLX24/58SM

KU-Band SATCOM

(Transportation)

2.4 Meter Antenna w/ 2-P Feed	AvL	AVL-2400K
RCI-3000 w/Flux Gate Compass and GPS Rx	AvL	AVL-RC-3000A/F
Upgrade to Wide Boom	AvL	AVL-WB-UG
Upgrade to Mode Match Feed	AvL	AVL-MM-UG
Mount WC Supplied SSPA/HPA on Boom w/A/L SW and Load	AvL	AVL PA-MT-SW-LD

Ext. Comm Panel (ECP)

(Transportation)

Sealed Keyboard	ADEK	DU-5K
Speaker	Fostex	6301B/EAV
2-Port PS/2 KVM Switch	NTI	KEEMUX-P2 R
17" Rackmount Display	Rackmount	LCDR7U17-04 / H
Telco and Network Connections	Coach	RJ-11/RJ45
Custom Mount	Coach	Custom Mount
On Line UPS	Liebert	GXT2-3000-RT120

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72 VDC External Battery	Liebert	GXT72vbatt
Network Card	Liebert	OC Web Card
Rack Mount Kit	Liebert	RMKIT 18-32
30 Amp Inlet	Liebert	MP2-130C
Dry Erase Board	Coach	0015 QRT-TE561T
Rear Connector Panel	Coach	RCP-VAN
Cork Board	Coach	0001 QRT-S541
Acceptance Test Procedure	Coach	ATP HLS
Technology Training	Coach	TT
Interior Connector Panel for Network and A/V Jacks	Coach	ICP-HLS
Surveillance Camera Mounting	Coach	SC Mount
Software Upgrade Allowance	Coach	Comp-SW

Include all Service and Maintenance manuals that are applicable.